



Improving Empathy in Nursing Students: A Comparative Longitudinal Study of Two Curricula

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Purpose: This study aimed to examine changes of empathy levels of nursing student in two different curricula structures, one called “traditional” and the other called “integrated” curricula. The study was a longitudinal design to follow a cohort of nursing students to examine the magnitude of changes in empathy in their education years. **Methods:** The study was conducted in a public school of nursing giving a baccalaureate degree, which had a fundamental change in their curricula. In all, 81 students from the traditional curricula and 66 students from the integrated curricula completed the study, and data from a total of 147 students were analyzed between 2003 and 2008. The Empathic Communication Skills Scale and the Empathic Tendency Scale were given to the students in the beginning of their freshman year and at the end of the fourth year just before graduation. **Results:** Although both of the curricula were seemed effective at improving empathic skills of students, especially the scores of students who completed the integrated curricula were higher than the scores of the other group attending the traditional curricula ($p < .05$). However, the empathic tendency scores of students in both curricula decreased at the end of fourth year. **Conclusion:** Although undergraduate nursing curricula either traditional or integrated improved empathic skills, it seemed that integrated curricula were more effective than traditional curricula in increasing empathic skills. The more hours and more experiential methods contributed to improved empathy. The decrease in empathic tendency requires further attention of educators and nurse managers.

Key words: Curriculum; Empathy; Nursing Education

INTRODUCTION

One of the key elements and main outcomes of high-quality, effective nursing education is therapeutic communication based on empathy. Improving the empathic attitude and therapeutic communication skills of nursing students has always been an important element of nursing education. Since the effective use of empathy consistently leads to more-positive patient outcomes, including greater patient satisfaction and compliance with treatment, regardless of the increasing technological demands of current health care organizations and the delivery of services, em-

pathy remains at the center of all nurse-patient encounters [1,2].

The authors have defined empathy as a predominantly cognitive attribute that involves the ability to understand (rather than feel) the experiences, concerns, and perspectives of others, combined with a capacity to communicate this understanding [1,2]. However, other scholars have emphasized that an intention to help is another feature of empathy (called the empathic tendency) associated with the emotional dimension of empathy [3-5]. The term “empathic tendency” encompasses the empathic communication potential of a person [3]. Studies evaluating the development of empathy in health care professionals have shown a

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Received: December 15, 2017 Revised: July 10, 2018 Accepted: August 17, 2018

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tendency to measure these two dimensions of empathy separately, and this studies have provided useful information about the development of an empathic attitude in nursing and medical students as well as important suggestions for how to teach it [3–5].

Nursing curricula, incorporating basic theoretical knowledge, usually devote a designated number of hours to teaching students how to understand patients' experiences and communicate their empathy to them [6–8]. However, evidence about the empathic skills of students and graduates is most often based on short-term measurements in relation to a particular course, seminar, or workshop. Studies conducted in recent years have shown that, in some groups, empathy was more likely to decrease over time. In these groups, although empathic skills seem to have been learned, the level of empathic tendency decreased by the end of their undergraduate education [1,4,5,7–10]. These results reveal that teaching empathy continues to be a challenge for educators and researchers.

Current developments in knowledge, technology, and regulations for patient safety have forced nursing curricula to change. However, effective communication remains one of the main outcomes of all nursing curricula, and empathy is a critical component of being an effective team member and health care provider [11–13].

In this context, nursing schools in Turkey, as in many countries worldwide, began to change their curricula in the early years of the new millennium. Before these changes began to be implemented, nursing schools were applying a traditional curricula in which lectures were structured according to the main nursing disciplines such as medical or surgical nursing, resembling the biomedical model. At the same time, educational methodology was basically traditional and teacher-centered; instructors played an active role in lecturing to students, and students were passive recipients of knowledge. After the early 2000s, many nursing schools began to restructure their curricula according to their own missions and visions, as well as those of the governing university. These new curricula were generally labeled “integrated curricula” to distinguish them from the traditional model. In these integrated curricula, basic concepts and topics related to nursing science and the nursing profession, in contrast to only medical topics, have been added to the curricula [14,15].

The structures of integrated curricula are generally based on

content related to human developmental stages, basic human needs, nursing concepts, body systems, and functional health patterns [14]. The titles of courses have also been changed according to their objectives, differentiating them from medical specialties. Along with course structures and titles, teaching methods have also changed. Instructors lecturing in integrated curricula have been encouraged to change their teaching methods from classic monologues to more-interactive instructional and assessment methods. In traditional curricula, communication as a course was usually relegated to one semester in the second academic year, and it was addressed in relation to cases in classes and/or in clinical practicums throughout the four academic years. By contrast, integrated nursing curricula are typically outcome-based, and effective and therapeutic communication skills are one of the main outcomes of these curricula. For this reason, unlike traditional curricula, communication-related content is integrated into various courses and lectures, as a certain subject and for a designated number of hours, from the beginning of the freshman year through graduation. In regard to evaluating these skills, in addition to other skills, empathic skills and empathic tendency are generally measured to demonstrate whether communication-related outcomes have been achieved. This is the strongest element of the new, integrated curricula [15].

To provide guidance to those who plan to develop new curricula, recognizing the development of empathy in students over the course of four years of nursing curricula is important. For this reason, the specific purpose of this study is to demonstrate whether there is a difference in empathic skills and empathic tendency levels of undergraduate nursing students between integrated and traditional curricula.

METHODS

1. Design

This descriptive study was designed as a comparative longitudinal study. Its purpose was to compare the development of empathic skills and empathic tendency levels of nursing students in two different curricula.

2. Sample

The sample for this study consisted of 184 students; 106 were enrolled in a traditional curricula ($n=106$) and 78 in an integrated curricula ($n=78$). Instruments were administered to both groups at the beginning of their first year of the nursing curricula and at the end of their fourth year, just before graduation. At this time, 81 students (76%) from the traditional curricula and 66 (85%) from the integrated curricula completed the second measurement.

There were no excluding criteria for sampling. All students were asked to participate in the study. Students who were already enrolled in either of the two curricula before the start of the study were given a choice of whether or not to participate.

3. Setting

This study was conducted at a state university school of nursing in Ankara, Turkey. The school of nursing at which the study was conducted awards a BSN degree. The school made the change and began to apply the integrated curricula while the traditional curricula was still being followed. That is, students who had already enrolled in the traditional curricula followed that path until they graduated; incoming freshman students enrolled in the new integrated curricula and followed it. The students in both curricula were studying at the same school of nursing. Both curricula were used until all those students who had enrolled under the traditional curricula had graduated. Then, the school continued with only the integrated curricula. The school accepts approximately 100 students each year. During the years this study was being conducted, the student-faculty ratio was 1 to 12 or 13. The number of students in each class ranged from 90 to 110, and the total number of students in the school was approximately 400.

In the traditional curricula of this school, which were general in Turkey, there was only one communication course named as "Interpersonal Relationships in Nursing", taking place in at the second year. Later, in the fourth year, there were several lectures on concepts and methods of therapeutic communication skills within the context of the psychiatric and mental health nursing course. There were no other specific courses, structured lectures, or training in regard to communication. Students were expected to use the skills they developed during their clinical hours,

which were connected to main courses within semesters, and these clinical hours usually amounted to one day each week in each semester. Moreover, the educational methodology relied on the traditional lecture model.

In the integrated curricula, courses were structured on the basis of the body systems, basic human needs, and human developmental stages as in previous studies [14,15]. The courses were named as "committees"; an example is "The Committee of Basic Human Needs: Respiratory System." The lectures consisted of knowledge about fundamental medical sciences and nursing sciences related to this body system and basic human needs. New communication courses had been developed as a parallel structure with the "committees" in the integrated curricula. All the communication-related courses had been added throughout the four years in every semester, and the hours allotted for these were approximately three times those of the traditional curricula. In addition, an interactive teaching model and experiential learning methods were applied in these courses.

In first year, the course was titled "Written and Oral Communication Skills" and included basic communication concepts such as self-awareness, self-knowledge, assertiveness, empathy, etc. In this course, interactive methods such as role-playing and discussions related to films were used. In addition, experiential activities were conducted as part of the first-year courses. For example, to be able to facilitate students' understanding of how patients felt about being hospitalized, several volunteer students were hospitalized in a surgical or medical unit for 24 hours as if they were actual patients. Another time, all the students attempted to use a wheelchair, crutches, or canes. Following these activities, they discussed their experiences with classmates in a large group [14]. In the second and third years of the curricula, courses taught included those such as "Psychosocial Problems and Nursing Approaches"; lectures focused on how to appropriately show empathy to people experiencing specific emotional responses or those being treated for illnesses, and included activities such as talking to an anxious patient or approaching a patient in palliative care in an empathic way. For example, during a committee consisting of caring for a patient with cancer, students focused on communicating with dying patients or how to break bad news to them. The structure of these lectures was usually based on interactive methods. The fourth year of the integrated

curricula included an internship; students were in clinical placements all year long (two semesters, four days a week). During this internship, they had learning opportunities for reflection by discussing their cases and interventions with their clinical instructors.

4. Instruments

Data were collected by researchers using the Empathic Communication Skills Scale (ECSS) and the Empathic Tendency Scale (ETS); a data collection form including several demographic features of students was also used. The ECSS and ETS were developed by Dökmen [3].

1) Empathic Communication Skills Scale (ECSS)

The ECSS measures empathy skills using six separate case scenarios, defined in short paragraphs, regarding daily life. For each case scenario, 11 empathic responses are possible. Respondents were expected to choose four statements for each case. The chosen statements were evaluated using a standard grading key. The ECSS score was the sum of all responses to the 24 statements and ranged from 62 to 220. The higher the score, the higher the empathic skills of the respondent were [3]. Dökmen [3] measured the test-retest reliability as $r=.91$, and Cronbach's α was $.83$ in his study.

2) Empathic Tendency Scale (ETS)

The ETS was developed to measure the emotional component of empathy. Empathic tendency relates to the attitudes of respondents that were consistent with having empathy for people in various situations. The ETS is measured using a five-point Likert-type scale with 20 items. The highest possible is 100, whereas the lowest is 20. Higher scores indicate a higher capacity for empathizing. Reliability, validity, and test-retest consistency were found to be $r=.82$, and Cronbach's α was determined as $.83$ in Dökmen's study [3].

Cronbach's α values of the scales in the present study were $.86$ for the ECSS and $.88$ for the ETS.

5. The study process

The school had changed its curricula, replacing the traditional curricula with integrated curricula in 2003. Thus, the research-

ers began their data collection in 2003, and the study continued until the end of 2008. The study was planned to take place during the years of the curricula change. Data collection began with those students who were enrolled in the traditional curricula track. The year that the new integrated curricula were implemented, the students who were enrolled in that curricula were also administered the same two scales. The students were asked to complete the scales in their first semester of nursing school; they were administered in an appropriate and separate classroom by the researchers. At the end of the study, the two scales were administered to all students in both groups again, just before their graduation.

To summarize, for the first measurement, all the students were informed about the study, and those who agreed to participate were administered both scales in their first semester. The second measurement was applied at the end of their fourth year. Of the study sample, 147 (80%) students completed the study. The flow of the research and numbers and measurements were displayed as Figure 1. Data collected from students who did not complete the second set of measurements were removed from the study.

6. Data analysis

At the end of the measurements, the data for 147 students were analyzed. The results were evaluated at a 95% confidence interval, $p<.05$ significance level. Non-parametric tests were used in data evaluation because the data did not show normal distribution (Kolmogorov-Smirnov test). Therefore, for the comparisons

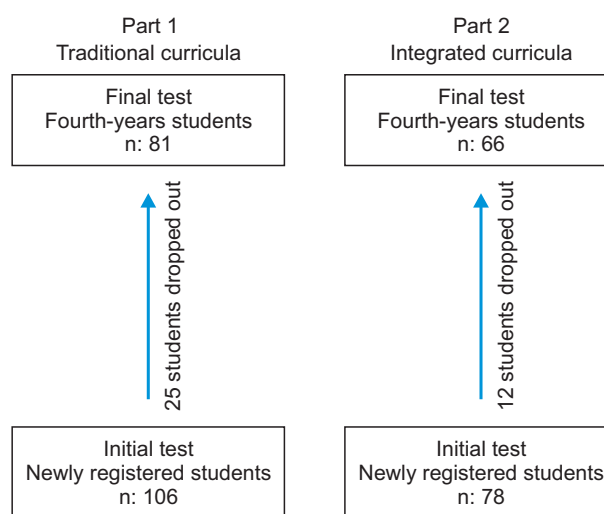


Figure 1. Process of the study.

of the ECSS and ETS scores related to two different curricula, the Mann–Whitney U test was applied; in order to evaluate the changes longitudinally for each curricula, the Wilcoxon signed-rank test was used.

7. Ethical considerations

Prior to enrollment, students were informed about the study, and those who volunteered to participate were included. No identifiable information was collected in the personal information form and scales. All participants were assured that their personal information would not be shared with third parties and that their scores would not affect their course grades. The approval of the Institutional Ethical Board (Gulhane Military Medical Academy Ethical Board/1491–677–10/1539) and official permission from the School of Nursing Administration were granted to conduct the research. Initial data were collected before the start of the academic year and before the beginning of lectures; final data were collected at the end of the fourth year after final exams. Thus, the authors took care to ensure that students did not feel pressured while responding.

RESULTS

The ages of the students were between 21 and 25 (mean 22.74 ±1.16) and all were female. The students in both groups were not statistically different comparing with socio–demographic traits such as family type, locations they lived and age ($p>.05$).

The comparisons of the ECSS scores for both groups are displayed in Table 1. Comparing the initial scores with the final scores for the ECSS, a significant difference was found between the two scores in both groups. The ECSS scores of students in both curricula increased significantly ($p<.05$). The ECSS mean scores of students in the traditional curricula increased from 129.99±19.20 to 167.47±21.28 ($p=.001$). The scores of students in the integrated curricula increased from 131.09±16.85 to 177.92 ±19.10 ($p=.001$). Despite the similarity in the initial ECSS scores of the students in both groups ($p>.05$), there was a significant difference between the two groups in the second set of ECSS scores ($p<.05$) at the end of their four years of undergraduate education. The final ECSS scores of students in the integrated curricula (177.92±19.10) were statistically higher than the scores of those in the traditional curricula (167.47±21.28) ($p=.002$).

The comparisons for the ETS scores are displayed in Table 2.

Table 1. Comparison of Initial and Final Scores of the Empathic Communication Skill Scale (ECSS)

Education program	Initial ECSS measurement				Final ECSS measurement				Z ^{††}	p
	Mean	SD	Median	IQR (min~max)	Mean	SD	Median	IQR (min~max)		
Traditional	129.99	19.20	132.0	25 (85~184)	167.47	21.28	166.0	31 (101~209)	-7.49	.001*
Integrated	131.09	16.85	130.0	19 (92~182)	177.92	19.10	180.5	20 (130~210)	-3.02	.001*
z [†]			-.13						-3.11	
p			.896						.002*	

IQR=Interquartile range; SD=Standard deviation.

[†]Mann-Whitney U test; ^{††}Wilcoxon signed ranks test.

* $p<.05$.

Table 2. Comparison of Initial and Final Scores of the Empathic Tendency Scale (ETS)

Education program	Initial ETS measurement				Final ETS measurement				Z ^{††}	p
	Mean	SD	Median	IQR (min~max)	Mean	SD	Median	IQR (min~max)		
Traditional	75.39	8.57	76.0	7 (48~90)	71.77	8.80	72.0	13 (50~88)	-3.20	.001*
Integrated	77.95	9.75	78.9	11 (44~97)	73.04	7.78	72.0	10 (54~90)	-3.01	.003*
z [†]			-2.25						-.71	
p			.024						.477	

IQR=Interquartile range; SD=Standard deviation.

[†]Mann-Whitney U Test; ^{††}Wilcoxon signed ranks test.

* $p<.05$.

Table 3. Comparison of Mean of the Difference between Initial and Final Scores between Traditional Curricula and Integrated Curricula

Scales	Traditional program (n=81)		Integrated program (n=66)		t	p
	Mean±SD	Median (25~75p)	Mean±SD	Median (25~75p)		
The change difference of ECSS scores	36.31±24.71	32.5 (-24~97)	47.51±21.56	47.5 (-5~98)	-2.92	.004*
The change difference of ETS scores	-0.71±9.11	0.0 (-24~20)	-2.71±9.00	-4.0 (-22~30)	1.32	.186

ECSS=Empathic communication skill scale; ETS=Empathic tendency scale; t=Student T test; SD=Standard deviation.

* $p < .05$.

Comparing the initial scores with the final scores for the ETS, a significant difference was found between these two scores in both groups. The ETS scores of students in both curricula decreased significantly ($p < .05$). The ETS scores of students in the traditional curricula decreased from 75.39 ± 8.57 to 71.77 ± 8.80 ($p = .001$). In the integrated curricula group, scores for the ETS decreased from 77.95 ± 9.75 to 73.04 ± 7.78 ($p = .003$). There was no significant difference between the two groups compared to the final ETS scores ($z = -0.71$, $p = .477$).

Since similar changes were found in both groups, the change in the scores was also calculated and both groups were compared to those scores. Thus, the mean of the difference in the scores between the initial and final scores (in both scales, the ECSS and the ETS, and both groups) were calculated. The comparisons of the mean change in scores are displayed in Table 3. The change difference for the ECSS scores (initial and final) of the students following the integrated curricula was significantly higher than the change difference of students in the traditional curricula ($t = -2.92$, $p = .004$). There was no statistical difference between the students following the integrated curricula and those following the traditional curricula when compared with change of scores of the final and initial ETS scores ($t = 1.32$, $p = .186$).

DISCUSSION

The findings of the study presented here have shown that empathic communication skills increased in both groups during their four years of undergraduate nursing education, regardless of the curricula structure. All the students had higher empathy scores at graduation compared to their initial scores. Despite both curricula having improved students' empathic skills, the empathic skills scores of students in the integrated curricula were significantly higher than those in the traditional curricula. Various

studies have demonstrated that empathic communication skills can be developed and improved by training curricula and/or by short-term, well-structured courses [8,10,13,16,17]. Moreover, studies have suggested that not only curricula structure but also teaching methodology could be significant in developing empathic skills [12,18,19]. Cunico et al. [6] suggested that attending empathy-training courses in addition to the formal curricula content and practice increased students' empathic capacities. McKenna et al. [10] indicated that learning through practice in undergraduate curricula is more effective than lecture content alone for developing empathy. However, these additional courses were usually administered to small groups, and instructional strategies included role-playing, watching videos, and learning by doing were often used as teaching methods. Brunero et al. [9] emphasized that the most promising method for nursing students to increase their levels of empathy is through experiential learning. The results of this study indicated that more hours allotted to theoretical and practical studies designed to increase empathy and communication skills helped to improve empathy skills.

The results of this study reinforced the importance of allocating a greater number of hours to the study of communicative skills and providing opportunities to practice the skills repeatedly in different situations. Furthermore, as stressed in adult-learning literature, experiential learning activities contributed to internalizing skills by helping students to understand what they need to learn individually.

By contrast, this study also showed that the empathic tendency levels of students in both groups decreased significantly at the end of their four undergraduate years. Regardless of curricula structure and teaching methods, this result indicates that empathic tendency, as the emotional dimension of empathy, deserves greater attention. Empathic tendency is related to critical factors in nursing care such as the willingness to listen, positive regard

for the other, and sensitivity toward others' lives and understanding the lives of others.

The authors investigating the development of empathy define the empathic tendency as the potential of an individual to understand the feelings and experiences of another. They suggest that learning empathy as a skill may not be enough for a nurse to achieve high-quality patient care. If there is no emotional intent to help others, in this case, patients, then empathic skills may not be used genuinely. Many previous studies have found similar results, suggesting increased empathic skills and decreased empathic tendency levels. For example, after training that comprised 14 empathy-training sessions, Dökmen [3] found an increase in empathic skills but no difference in empathic tendency. Pazar et al. [5] and Ward et al. [7] found similar decreases in the empathic tendencies of nursing students.

Studies conducted with medical students have suggested similar results [4,8,20–22]. Chen et al. [20] demonstrated that empathy levels of medical students decreased significantly following the clinical-practice period. The authors addressed the stressful aspects of medical education, such as extended work hours, insomnia, and working with people who are suffering [4]. These kinds of educational experiences can also be applied to nursing education. Similar experiences, challenges, and confrontations are experienced during the years of nursing education.

Before students are well equipped, encountering individuals who are suffering pain, loneliness, weakness, and dependence upon others and those facing death during clinical experiences may cause insensibility and avoidance of empathizing. In addition, frequent encounters of this kind can create a kind of desensitization resulting in normalization. Moreover, students can be at risk for compassion fatigue later on, which can result in a reduction in empathy [23,24]. The most common symptom of compassion fatigue is emotional numbness [24]. Despite an assumption by some authors that nursing students are not faced with such dramatic experiences during their clinical practices, the findings of this study implied that they might avoid empathy in order to protect themselves against pain and anxiety caused by emotions such as fear, hopelessness, desperation, and other negative feelings. These kinds of feelings may emerge in relation to patients and their families, but they can also be related to the academic environment and educators' attitudes.

There are also many studies showing the sources of stress that nursing students experience during their education. For example, Gibbons [25] stated that nurse educators need to consider how course experiences contribute to potential distress. Also Gibbons et al. [26] addressed the use of avoidance as a coping strategy and the strongest predictor of burnout among nursing students. Arieli [27] addressed the emotional challenges of clinical placements and suggested that understanding the types of emotional work that students do in the process of their clinical experience is critical to educators.

While this study reinforces the concept that instructional methods have the potential to improve the empathic capacity of nursing students, as suggested by Ward [28], it also points to the need to study empathic tendency, a more personal and emotional element of empathy. As a result, to be able to achieve a desired empathic attitude in students and graduates, nursing educators should focus on the emotional, personal, and tacit aspects of learning experiences. The use of simulation in nursing education seems to be promising method for illuminating this dark side of the tendency to empathize [29,30].

There are two major limitations of this study. The study sample is relatively small, and the data are somewhat outdated. However, since current curricula have had similar constructions and courses in nursing education, the results can still be considered timely. In addition, the measurement tools were based on self-report, and there were no observational tests to determine actual empathic behaviors.

CONCLUSION

The results of the study suggest that undergraduate nursing curricula, whether traditional or integrated, can improve empathy. However, it seemed that the integrated curricula were more effective than the traditional curricula for increasing empathic communication skills. The decrease in empathic tendency levels in both curricula requires further research. Conducting observational studies to determine the outcomes of empathic competency on patient care and job performance are recommended. Providing personalized support and consultation to students about how to express their emotions, how to cope with unfavorable emotions, and how to enhance their helping behaviors can be beneficial for

improving an integrated empathic approach. Educators and nurse managers should also give more attention to the decrease in empathic tendency levels and attempt to discover the reasons for and the results of this phenomenon.

CONFLICTS OF INTEREST

The authors declared no conflict of interest.

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